



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,678	09/23/2003	Mark J. Pettay	PAT-008D	1052
29129 7590 04/10/2009 MICHELLE A. ZARINELLI C/O WEST CORPORATION 11808 MIRACLE HILLS DR. MAIL STOP: W11-LEGAL OMAHA, NE 68154				
EXAMINER				
SAINT CYR, LEONARD				
ART UNIT		PAPER NUMBER		
2626				
NOTIFICATION DATE		DELIVERY MODE		
04/10/2009		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

MAZARINELLI@WEST.COM

Office Action Summary

Application No.

10/668,678

Applicant(s)

PETTAY ET AL.

Examiner

LEONARD SAINT CYR

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09/23/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-85/86)
Paper No(s)/Mail Date 12/31/08
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 01/29/09 have been fully considered but they are not persuasive.

Applicant argues that Walker et al., do not teach providing second scores related to an overall compliance with the at least one voice interaction and not suggesting that such a second score could be determined (Amendment, pages 13 - 20).

The examiner disagrees, Walker et al., teach "Using speech recognition, the POS terminal determines whether the audio signal corresponds to the prompt, and thus whether the operator spoke the prompt properly...In another embodiment, the POS terminal stores an indication of whether the operator has properly spoken the prompt, thereby allowing the performance of the operator to be measured. Calculating a percentage of times the verbal message was spoken properly during a predetermined period of time" (col.6, lines 2 – 27; col.11, lines 48 – 51; col.2, lines 10-19). Determining whether the operator spoke the prompt properly and calculating a percentage of times the verbal message was spoken properly during a predetermined period time imply providing second scores related to an overall compliance with the at least one voice interaction, since an overall percentage times is calculated for each properly spoken verbal message.

Applicant argues that Walker et al., do not teach comparing a plurality of duration parameters to respective portions of the actual duration of the given one interaction (Amendment, pages 13 – 20).

The examiner disagrees, Walker et al., teach that “Typically, the predetermined time interval starts at a predetermined time, such as when the prompt is transmitted, and may have a predetermined duration, such as five seconds; the number of transactions in which a verbal message was spoken properly during a predetermined period of time” (col.6, lines 24 – 29; col.9, lines 6 – 10). Determining the number of transactions in which a verbal message was spoken properly during a predetermined period of time implies comparing a plurality of duration parameters to respective portions of the actual duration of the given one interaction.

Applicant argues that neither Walker et al., nor Rongley teach an automatic speech recognition component having a confidence level threshold including supplying audio files in real time of least one voice interaction and/or recording the at least one voice interaction and supplying the files to the automatic speech recognition component (Amendment, pages 13 – 20).

The examiner disagrees, since **Rongley discloses** “system has an upper and a lower threshold for comparison to the confidence level determined for a vocabulary word match for a captured utterance” (col.6, lines 46 – 56). And **Walker et al., disclose** that “The POS terminal then receives an audio signal via a microphone or similar device to record what the operator has spoken. Using speech recognition, the

POS terminal determines whether the audio signal corresponds to the prompt, and thus whether the operator spoke the prompt properly (col.2, lines 7 – 13). Thus, Walker et al., in view of Rongley teach all parts of the limitations.

Applicant argues Walker et al., do not specifically teach comparing the actual duration of the given one interaction to the expected duration parameter and comparing a plurality of duration parameters to respective portions of the actual duration of the given one interaction (Amendment, page 19).

The examiner disagrees, since Walker et al., teach “The audio signal may represent sound received during a predetermined time interval. Typically, the predetermined time interval starts at a predetermined time, such as when the prompt is transmitted, and may have a predetermined duration, such as five seconds... **The POS terminal determines whether the activity rate is below a predetermined threshold** (step 1504). For example, it may be determined whether there are less than three transactions completed per minute. **If the activity rate is below a predetermined threshold (i.e. there is a low activity rate), then an appropriate prompt is transmitted**” (col.9, lines 5 – 15; col.15, lines 6 – 16).

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1 – 5, 7 – 10, 12, 16 – 24, 26 – 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al., (US Patent 6,567,787) in view of Rongley (US Patent 5,758, 322).

As per claims 1, 4, 23, 48, and 49, Walker et al., teach evaluating a compliance of at least one agent working at or for a call center and/or telecommunications center reading at least one script to at least one client, the method comprising at least the following:

conducting at least one voice interact between the at least one agent and the at least one client, wherein the at least one agent follows the at least one script ("cashiers that interact with customers"), wherein the at least one agent and the at least one client are at a distant location from one another ("drive through application"; col.7, lines 9 – 26, and 46 – 60; col.1, lines 27, and 28; col.5, lines 3 - 8);

retrieving at least one corresponding automatic speech recognition texts for automatic speech recognition analysis with an automatic speech recognition component (col.2, lines 7 – 13);

evaluating ("determine whether the audio signal satisfies a predetermined criterion") the at least one voice interaction with the automatic speech recognition component including supplying audio files in real time of least one voice interaction and/or recording the at least one voice interaction and supplying the files to the automatic speech recognition component, adapted to analyze and compare the at least one voice interaction with the at least one corresponding automatic speech recognition texts; and determine whether the at least one agent has adequately followed ("process

the stored audio signals...generate operator performance measurements”), the at least one script based on a plurality of first scores related to respective portions of the at least one voice interaction and based on a second score related to an overall compliance with the at least one voice interaction (“percentage of times the verbal message was spoken properly”), wherein at least one of the first scores and the score are different for their respective portions of the at least one voice interaction (“calculating a percentage of times the verbal message was spoken properly during a predetermined period of time” fig.11b, elements 1118, and 1126; col.7, lines 46 –65; col.6, lines 2 – 26; col.11, lines 48 - 51); and

conducting at least one voice interaction at least in part on at least one communications network (col.3, lines 40 – 56).

Walker et al., do not determining whether the at least one agent has adequately followed, based on the confidence-level threshold relating to the automatic speech recognition component’s ability to analyze and compare the at least one voice interaction with the at least one corresponding automatic speech recognition texts.

Rongley teaches that the system has an upper and a lower threshold for comparison to the confidence level determined for a vocabulary word match for a captured utterance. If the confidence level for a particular match is above the upper threshold, the utterance is accepted. If it is between the two threshold, the system prompts the speaker either to repeat the utterance or asks if the vocabulary word with the highest confidence level was intended. If the confidence level is below the lower threshold, the utterance is ignored (col.6, lines 46 – 56).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use confidence threshold as taught by Rongley in Walker et al., because that would increase the speed and accuracy of the voice recognition (col.2, lines 22 – 25).

As per claim 2, Walker et al., further disclose that conducting at least one voice interaction involving a telemarketing agent (col.5, lines 40 – 45).

As per claim 3, Walker et al., further disclose that conducting at least one voice interaction governed by at least one script that includes text corresponding to at least one offer of at least one of goods and services (col.11, lines 30 – 35).

As per claims 5, and 24, Walker et al., further disclose that conducting at least one voice interaction at least in part on a publicly switched telephone network (col.3, lines 40 –52).

As per claim 7, Walker et al., further disclose that conducting at least one voice interaction at least in part on at least one communications network having at least one wireless component ("electric signals"; col.4, lines 23 – 29).

As per claim 8, Walker et al., further disclose that conducting at least one voice interaction at least in part on at least one telephone call (col.5, lines 40 – 45).

As per claim 9, Walker et al., further disclose conducting at least one telephone call that is initiated by the at least one client (col.5, lines 40 – 45; col.12, lines 63 – 65).

As per claim 10, Walker et al., further disclose conducting at least one telephone call that is initiated by an entity other than the at least one client ("telemarketing"; col.5, lines 40 – 45).

As per claim 12, Walker et al., further disclose performing at least one action based upon at least one result of the evaluating of the at least one voice interaction ("receive the weekly bonus earned"; col.6, lines 24 – 39).

As per claim 16, Walker et al., further disclose reviewing at least one determination of whether the at least one agent has adequately followed the at least one script ("the operator may earn \$0.10 for each percentage point of the percentage of times the verbal message was spoken properly"; col.6, lines 24 – 39).

As per claim 17, Walker et al., further disclose defining at least one score ("percentage") at least one automatic speech recognition component (col.6, lines 24 – 39).

As per claim 18, Walker et al., further disclose evaluating the at least one voice interaction includes evaluating a plurality of panels ("a number of transactions in which the operator participated"; col.5, lines 46 – 60).

As per claim 19, Walker et al., further disclose assigning a respective a score to each one of the panels ("percentage"; col.6, lines 24 – 32).

As per claim 20, Walker et al., further disclose comparing data representing an actual duration of at least one interaction, wherein the at least one agent reads at least one script to the at least one client, to data representing an expected duration parameter associated with the at least one interaction ("predetermined duration"; col.7, line 60; col.9, lines 6 – 12).

As per claims 21, and 22, Walker et al., further disclose dispositioning at least one interaction, wherein the at least one agent reads at least one script to the at least one client, based at least in part on comparison of data representing an actual duration of the at least one interaction to data representing an expected duration parameter associated with the at least one interaction ("predetermined duration, and time duration of the verbal message"; col.7, line 60; col.9, lines 6 – 12).

As per claim 26, Walker et al., further disclose that at least one call center that includes a plurality of agent workstations ("POS terminals"; col.3, lines 23 - 26).

As per claim 27, Walker et al., further disclose that at least one of the agent workstations includes at least a telephone and a computer terminal (col.5, lines 41 – 45).

As per claim 28, Walker et al., further disclose that said agent is a telemarketing agent (col.5, lines 41 – 45).

As per claim 29, Walker et al., further disclose that said agent is a customer service agent (col.3, line 10).

As per claim 30, Walker et al., further disclose causing at least action to be taken includes transmitting at least one signal to the at least one agent ("sound transmitted to headphone"; col.2, lines 1 – 9).

As per claim 31, Walker et al., further disclose transmitting at least one signal to at least one reviewing authority (" billing system in communication with the operator database"; col.6, lines 24 – 39).

As per claim 32, Walker et al., further disclose making an entry in a script compliance incentive system ("strongly incentive"; col.3, lines 11 – 15).

Claim Rejections - 35 USC § 102

4. Claims 33 – 51 are rejected under 35 U.S.C. 102(e) as being anticipated by Walker et al., (US Patent 6,567,787).

As per claims 33, 50, and 51, Walker et al., teach a method of performing quality analysis on a plurality of interactions, each one of the interactions involving at least one agent, the method comprising at least the following:

obtaining data representing at least a given one of the interactions ("the POS terminal records a phrase spoken by the operator"), each one of the interactions having a respective actual prior duration parameter associated therewith; wherein the at least a given one of the interactions and the respective actual prior duration parameter associated therewith are defined on, including, a per-interaction basis and a per-category basis ("predetermined time"...drive through application"; col.9, lines 5, and 6; col.7, lines 46 – 60, col.5, lines 3 - 8);

obtaining data representing at least one prior expected duration parameter evaluated by an automatic recognition component having a log record module that is applicable to at least the given one of the interactions ("time duration of the verbal message"; col.7, lines 46 – 60);

for the least the given one of the interactions, comparing the actual duration of the given one interaction to the expected prior duration parameter and comparing a plurality of prior duration parameters to respective portions of the actual duration of the given one interaction ("predetermined time"), and dispositioning at least the given one interaction based on the comparing ("below a predetermined threshold, then an

appropriate prompt is transmitted"; col.14, line 59 – col.15, line 17; col.6, lines 24 – 29; col.9, lines 5 – 15; col.15, lines 6 – 16).

As per claim 34, Walker et al., further disclose receiving a respective voice record of the given one of the interactions ("plurality of records"; col.6, lines 53 – 57).

As per claim 35, Walker et al., further disclose receiving a respective voice record of the given one of the interactions involving an agent physically located at a caller center ("cashier of the POS terminal"; col.3, lines 32 – 35: Abstract, lines 1, and 2).

As per claim 36, Walker et al., further disclose receiving a respective voice record of the given one of the interactions involving an agent physically located remotely from a call center ("remote computing device from company headquarters"; col.14, lines 43 – 47).

As per claim 37, Walker et al., further disclose receiving data representing at least one expected duration parameter applicable to at least one interaction involving at least one call center that is processing the at least one interaction on behalf of at least one client of the at least one call center ("POS terminal"; col.7, lines 46 – 60).

As per claim 38, Walker et al., further disclose categorizing at least some of the plurality of interactions, and associating a respective expected duration parameter ("the prompted may be selected from a set of prompt based on predetermined duration") with each category ("allowing prompts to be customized to variety of situations such as suggestive offers for different products for which the customer is eligible"; col.5, lines 46 – 60; col.7, lines 12 – 40; col.8, line 64 – col.9, line 10).

As per claim 39, Walker et al., further disclose categorizing at least some of the plurality of interactions includes defining respective categories for at least one of inbound telemarketing calls, outbound telemarketing calls, customer service calls, and technical support calls ("good or services"; col.5, lines 41 – 45; col.3, lines 1 – 5).

As per claim 40, Walker et al., further disclose comparing the actual duration of the given one interaction to an expected duration parameter associated with a category to which the given one interaction is assigned (activity rate is a below a predetermined threshold"; col.15, lines 6 – 17).

As per claim 41, Walker et al., further disclose determining the comparing indicates a quality control issue with an agent processing the given interaction ("the cashier does not properly provide the verbal message"; col.15, lines 21 – 25).

As per claim 42, Walker et al., further disclose determining the comparing indicates a fraud issue with an agent processing the given interaction (“preventing the cash drawer from opening and preventing money from being withdrawn”; col. 9, lines 19 – 25).

As per claim 43, Walker et al., further disclose assigning the given interaction for evaluation because the actual duration of the given interaction is less than the pre-defined standard applicable to the at least one interaction (“below a predetermined threshold”; col.6, lines 6 – 20).

As per claim 44, Walker et al., further disclose assigning the given interaction for evaluation because the actual duration of the given interaction exceeds a pre-defined standard applicable to the given interaction (“not below a predetermined threshold”; col.6, lines 6 – 20).

As per claim 45, Walker et al., further disclose assigning the given interaction for evaluation because the actual duration of the given interaction is less than the pre-defined threshold applicable to the given interaction (“below a predetermined threshold”; col.6, lines 6 – 20).

As per claim 46, Walker et al., further disclose assigning the given interaction for evaluation because the actual duration of the given interaction exceeds a pre-defined

Art Unit: 2626

threshold applicable to the given interaction ("not below a predetermined threshold"; col.6, lines 6 – 20).

As per claim 47, Walker et al., further disclose assigning the given interaction for evaluation because the actual duration of the given interaction falls outside of a pre-defined range applicable to the given interaction ("not within a predetermined range"; col. 9, lines 43 - 45).

5. Claims 6, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al., (US Patent 6,567,787) in view of Rongley (US Patent 5,758, 322), and further in view of Surace et al., (US Patent 6,144,938).

As per claim 6, and 25, Walker et al., in view of Rongley do not specifically teach conducting the at least one voice interaction at least in part on at least one Internet.

Surace et al., teach an application such as Internet that provides access to email (col.8, lines 51 – 53).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to use Internet communication as taught by Surace et al., in Walker et al., in view of Rongley, because that would make the network communication more flexible (col.21, lines 30 – 33).

6. Claims 11, and 13 - 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al., (US Patent 6,567,787) in view of Rongley (US Patent 5,758, 322), and further in view of Avi (US Patent 5,66,157).

As per claim 11, Walker et al., in view of Rongley do not specifically teach converting the at least one voice interaction into at least one digital signal comprising at least one spectral representation of the at least one voice interaction; comparing the at least one digital signal to at least one reference standard that includes at least one known vocabulary, and matching the at least one digital signal to at least one of words and phrases contained in the at least one reference standard.

Avi discloses pick- up the acoustic signals, and processes the signals by means of digital and spectral analysis techniques. The output of the analysis subsystem is compared in the pattern comparator subsystem with selected predetermined words in memory. The templates include brief and easily recognizable terse expressions, some of which are single words (col.10, line 64 – col.11, line 10).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to convert said voice interaction into digital signal comprising a spectral representation as taught by Avi in walker et al., in view of Rongley, because that would help recognize different sounds, accents for word clarification (col.11, lines 7 – 10).

As per claim 13, Walker et al., further disclose causing at least action to be taken includes transmitting at least one signal to the at least one agent ("sound transmitted to headphone"; col.2, lines 1 – 9).

As per claim 14, Walker et al., further disclose transmitting at least one signal to at least one reviewing authority ("billing system in communication with the operator database"; col.6, lines 24 – 39).

As per claim 15, Walker et al., further disclose making an entry in a script compliance incentive system ("strongly incentive"; col.3, lines 11 – 15).

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2626

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEONARD SAINT CYR whose telephone number is (571) 272-4247. The examiner can normally be reached on Mon- Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571) 272-7602. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or (571)-272-1000.

LS
04/05/09

/Richemond Dorvil/
Supervisory Patent Examiner, Art Unit 2626